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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,487

09/21/2004

Khamir Girish Joshi

04-11

5486

32583 7590 11/18/2009  
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EXAMINER

SINGH, SUNIL

ART UNIT

PAPER NUMBER

3672

MAIL DATE

DELIVERY MODE

11/18/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/711,487	<b>Applicant(s)</b> JOSHI ET AL.	
	<b>Examiner</b> Sunil Singh	<b>Art Unit</b> 3672	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 58-62, 64, 65 and 73-85 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 58-62, 64, 65 and 73-85 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “tether system” called for in claim 61 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 58,59,62,64,65,73-76, 78-79, 80-82,85 are rejected under 35 U.S.C.

103(a) as being unpatentable over Brown '325 in view of Ames or Richmond et al. or De Baan (US 4075862, 5582252, 6109830).

Brown discloses an apparatus to traverse a seabed topographic feature, comprising:  
a subsea pipeline constructed to carry fluids from a first location across the topographic feature to a second location; wherein: the topographic feature is selected from the group consisting of subsea basins, domes, valleys, cliffs, canyons, escarpments and combinations thereof; said pipeline comprising at least one distributed buoyancy region (32,38); said pipeline comprising a first unbuoyed pipeline section (27, Fig. 2) extending from said first location on a sea floor to said distributed buoyancy region and a second unbuoyed pipeline section (this is considered pipe member between member 20 and 46 depicted in Fig. 3) extending from said distributed buoyancy region to said second location on a sea floor; and said distributed buoyancy region comprising two or more spatially arranged discrete buoyancy solutions (38) directly attached to said distributed buoyancy region connecting said first and said second pipeline sections in fluid communication; and a first flexure control (33,34,35) device at said first location to reduce bending stress and strain in said first unbuoyed pipeline section. Brown

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discloses the invention substantially as claimed. However, Brown is silent about the distributed buoyancy region creating a positively buoyant inverse catenary section.

Ames, Richmond et al. and De Baan all teach a distributed buoyancy region creating a positively buoyant inverse catenary section (see Figs. 6, 2, 3b). It would have been considered obvious to one of ordinary skill in the art to modify Brown to have the buoyant distributed region create a positively buoyant inverse catenary section as taught by either Ames or Richmond et al. or De Baan in order to traverse an uneven seabed more easily.

4. Claims 60,77,83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Ames or Richmond et al. or De Baan as applied to claims 58,73,80 above, and further in view of Official notice by Examiner

Brown (once modified) discloses the invention substantially as claimed. However, (the once modified) Brown is silent about the buoyancy solution comprising a coating of buoyant material. The examiner takes official notice that buoyancy solution comprising a coating of buoyant material is old and well known. It would have been considered obvious to one of ordinary skill in the art to further modify (the once modified) Brown by substituting a coating of buoyancy material for the discrete buoyancy solutions disclosed Brown since such a modification would yield predictable results (like not losing buoyancy due to rupturing of an air buoyancy module).

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5. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Ames or Richmond et al. or De Baan as applied to claim 58 above, and further in view of Wittgenstein (US 3173271)

Brown (once modified) discloses the invention substantially as claimed. However, (the once modified) Brown is silent about including a tether system. Wittgenstein teaches a tether system (see col. 1 lines 1-35, see Figs. 1,2,4). It would have been considered obvious to one of ordinary skill in the art to further modify (the once modified) Brown to include a tether system as taught by Wittgenstein since such a modification would yield predictable results like retain the pipeline in a desired position.

6. Claim 84 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Ames or Richmond et al. or De Baan as applied to claim 58 above, and further in view of Welch, Jr. et al. (US 3658366)

Brown (once modified) discloses the invention substantially as claimed. However, (the once modified) Brown is silent about including a second flexure control device located between the second unbuoyed pipeline section and the distributed buoyancy region.

Welch, Jr. et al. teaches a flexure control device located between pipeline sections (see front page of patent and Figure 3). It would have been considered obvious to one of ordinary skill in the art to further modify (the once modified) Brown to include a second flexure control device as taught by Welch, Jr. et al. and locate it between the second unbuoyed pipeline section and the distributed buoyancy region since such a modification would reduce bending stress.

***Response to Arguments***

7. Applicant's arguments with respect to claim 58 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil Singh whose telephone number is (571) 272-7051. The examiner can normally be reached on Monday through Friday 10:30 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sunil Singh/  
Primary Examiner, Art Unit 3672

Sunil Singh  
Primary Examiner  
Art Unit 3672

SS

11/12/09